

## **RESTATEMENTS AND AMENDMENTS**

### **In the Claims:**

The following is a list of claims currently pending in this application and their current status. This listing of claims replaces all prior versions and listings in this application.

1. - 47. (Canceled).

48. (Previously presented) A method for establishing transactions among trading partners in a network, comprising:

maintaining a registry of machine-readable specifications specifying business services offered by trading partners, the machine-readable specifications including at least one of definitions of, and references to definitions of, services offered and at least one of definitions of, and references to definitions of, documents to be exchanged with such services by trading partners; and providing, in response to a request, one or more of the machine-readable specifications from said registry via a communication network to a requesting node.

49. (Previously presented) The method of claim 48, wherein said machine-readable specifications comprise data identifying respective descriptions of sets of storage units and logical structures for the sets of storage units.

50. (Previously presented) The method of claim 49, wherein said machine-readable specifications included data adapted for parsing to identify an input document and one or more transactions which accept said input document.

51. (Previously presented) The method of claim 48, wherein the definitions of the documents to be exchanged comprise respective descriptions of sets of storage units and logical structures for the sets of storage units.

52. (Previously presented) The method of claim 48, wherein the machine-readable specifications include documents compliant with a definition of a predefined document including logical structures for storing an identifier of a particular transaction, and at least one of definitions and references to definitions of input and output documents for the particular transaction.

53. (Previously presented) The method of claim 49, wherein the storage units comprise parsed data.

54. (Previously presented) A method for establishing transactions among trading partners in a network, comprising:

maintaining a registry of machine-readable specifications specifying business services offered by trading partners, the machine-readable specifications including at least one of definitions of, and references to definitions of, services offered and at least one of definitions of, and references to definitions of, documents to be exchanged with such services by trading partners, wherein said machine-readable specifications comprise data identifying respective descriptions of sets of storage units and logical structures for the sets of storage units; and

providing, in response to a request, one or more of the machine-readable specifications from said registry via a communication network to a requesting node,

wherein the storage units comprise parsed data, and wherein the parsed data in at least one of the documents to be exchanged comprises:

character data encoding text characters in the one of the input and output documents, and

markup data identifying sets of storage units according to the logical structure of the one of the input and output documents.

55. (Previously presented) The method of claim 54, wherein at least one of the sets of storage units encodes a plurality of text characters providing a natural language word.

56. (Previously presented) The method of claim 54, wherein the specification includes interpretation information for at least one of the sets of storage units identified by the logical structure of at least one of the input and output documents, encoding respective definitions for sets of parsed characters.

57. (Previously presented) The method of claim 53, wherein the storage units comprise unparsed data.

58. (Previously presented) The method of claim 48, including associating trading partners with said machine readable specifications.

59. (Previously presented) An apparatus used for establishing transactions among trading partners in a network, comprising:

- a network interface;

- memory storing data and programs of instructions, including a registry of machine-readable specifications specifying business services offered by trading partners, the machine-readable specifications including at least one of definitions of, and references to definitions of, services offered and at least one of definitions of, and references to definitions of, documents to be exchanged with such services by trading partners; and

- a data processor coupled to the memory and the network interface which executes programs of instructions; wherein the programs of instructions include

logic to provide, in response to a request received at the network interface, one or more of the machine-readable specifications from said registry via a communication network to a requesting node.

60. (Previously presented) The apparatus of claim 59, wherein said machine-readable specifications comprise data identifying respective descriptions of sets of storage units and logical structures for the sets of storage units.

61. (Previously presented) The apparatus of claim 60, wherein said machine-readable specifications include data adapted for parsing to identify an input document and one or more transactions which accept said input document.

62. (Previously presented) The apparatus of claim 59, wherein the definitions of the documents to be exchanged comprise respective descriptions of sets of storage units and logical structures for the sets of storage units.

63. (Previously presented) The apparatus of claim 59, wherein the machine-readable specifications include documents compliant with a definition of a predefined document including logical structures for storing an identifier of a particular transaction, and at least one of definitions and references to definitions of input and output documents for the particular transaction.

64. (Previously presented) The apparatus of claim 62, wherein the storage units comprise parsed data.

65. (Previously presented) An apparatus used for establishing transactions among trading partners in a network, comprising:

- a network interface;

- memory storing data and programs of instructions, including a registry of machine-readable specifications specifying business services offered by trading partners, the machine-readable specifications including at least one of definitions

of, and references to definitions of, services offered and at least one of definitions of, and references to definitions of, documents to be exchanged with such services by trading partners, wherein the definitions of the documents to be exchanged comprise respective descriptions of sets of storage units and logical structures for the sets of storage units; and

a data processor coupled to the memory and the network interface which executes programs of instructions; wherein the programs of instructions include

logic to provide, in response to a request received at the network interface, one or more of the machine-readable specifications from said registry via a communication network to a requesting node;

wherein the storage units comprise parsed data, and the parsed data in at least one of the documents to be exchanged comprises:

character data encoding text characters in the one of the input and output documents, and

markup data identifying sets of storage units according to the logical structure of the one of the input and output documents.

66. (Previously presented) The apparatus of claim 65, wherein at least one of the sets of storage units encodes a plurality of text characters providing a natural language word.

67. (Previously presented) The apparatus of claim 65, wherein the specification includes interpretation information for at least one of the sets of storage units identified by the logical structure of at least one of the input and output documents, encoding respective definitions for sets of parsed characters.

68. (Previously presented) The apparatus of claim 64, wherein the storage units comprise unparsed data.

69. (Previously presented) The apparatus of claim 59, wherein the programs of instructions include logic to associate identifiers of trading partners with said machine-readable specifications.

70. (Previously presented) A method for executing transactions among nodes in a network, the network including a plurality of nodes which execute processes involved in the transactions, comprising:

- publishing through a communication network a machine-readable specification of an interface to an operation, the specification including a definition of an input document and a definition of an output document, the definitions of the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units;

- receiving data comprising an input document through the communication network;

- parsing the data according to the specification to identify the input document;

- providing at least a portion of the input document in a machine-readable format to a transaction process which produces an output;

- forming an output document, based on the specification and according to the definition of the output document; and

- transmitting the output document through the communication network.

71. (Previously presented) The method of claim 70, wherein said machine-readable specifications comprise data identifying respective descriptions of sets of storage units and logical structures for the sets of storage units.

72. (Previously presented) The method of claim 71, wherein said machine-readable specifications included data adapted for parsing to identify an input document and one or more transactions which accept said input document.

73. (Previously presented) The method of claim 70, wherein the definitions of the documents to be exchanged comprise respective descriptions of sets of storage units and logical structures for the sets of storage units.

74. (Previously presented) The method of claim 70, wherein the machine-readable specifications include documents compliant with a definition of a predefined document including logical structures for storing an identifier of a particular transaction, and at least one of definitions and references to definitions of input and output documents for the particular transaction.

75. (Previously presented) The method of claim 71, wherein the storage units comprise parsed data.